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Landscape Design and Park Users' Preferences

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Abstract

Landscape design is described as the design of areas; it consists of the results of interaction and action of human and/or natural-cultural factors, by bringing together science and art, and is associated with human psychology in the processes, both of their design and use. The main aim of this study is the identification of user preferences in urban landscape design studies, according to psychological developmental stages (age). Accordingly, this study aims to conduct a survey in the biggest district of Ankara, Çankaya, to reveal the preferences of each age group, with regard to the characteristics of hard and soft landscape elements.

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1. Introduction

The user and their psychology are two of the main factors in landscape design, which is defined as the design of areas that are formed as a result of the interaction and action of human and/or natural-cultural factors, by bringing together science and art in the processes of both designing and using the landscapes.

Landscape architecture takes into account “age” as one of the factors which affects the psychology of users, while trying to meet the technical, social, cultural and natural requirements of the users, within the landscape design.

With this study, user likes and preferences relate to important factors in the landscape design, (e.g. color, texture, form, lighting and accessibility), and are defined as depending on their developmental stages (age).

2. Methodology

The method of this study depends on literature review and questionnaire study. The material which comprises the data of this study was obtained from the findings of the questionnaires. The questionnaire survey in this study

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was conducted in the district of Çankaya, in the city of Ankara, Turkey, between October and November 2005, among seventy three people in total, using the face to face interview method.

In comparing the age groups of the users with their preferences and likes, the khi kare test was used. $P < 0, 20$ values are accepted as meaningful. All statistical analyses are done by using the SPSS statistic packet.

The reasons why the questionnaires were conducted in Çankaya is that it is the biggest district of Ankara and users from different economic backgrounds of society live there (bottom, middle, high). According to the year 2000 population census, the population of Çankaya county is 758.490 (Çankaya Municipality, 2002) and the age and sex distribution of Çankaya County population is; 0-9 years: 42.206 women, 44.379 men; 10-19 years: 62.802 women, 67.327 men; 20-24 years: 43.172 women, 58.578 men; 25-64 years: 200.753 women, 185.703 men; 65 years and over: 31.718 women, 21.551 men; unknown: 132 women, 169 men.

Since the standard deviation among the age groups is 1%, conducting the questionnaire with 1/10000 of the population is adequate (Yamane 2001). By considering the possibility that children, who were 11 years old and younger, may give misleading answers to the questions, this age group was not included in the questionnaire. 301 people, whose age group was unknown, were also not counted in the questionnaire study. The number of people for whom the questionnaire should be applied is sixty seven, while the number of people to whom the questionnaire was applied is seventy three. The answers of the users to the questionnaire are evaluated by taking into account the age states of developmental psychology[†] as defined below (Onur 2001);

1. Childhood (0–2 years babyhood, 3–6 years early childhood, 7–11 years late childhood)
2. Adolescence (12–18 years)
3. Youth (19–25 years)
4. Adulthood (26–34 years early adulthood, 35–60 years middle adulthood, 61–65 years late adulthood)
5. Senility (over 65 years)

3. Findings

In the user questionnaire, users were asked several questions in order to learn their preferences and likes about open green areas. These questions were intended to address the sense organs (color, texture, form, smell, sound) of the users, accessibility, lighting and the users' developmental peculiarities. The findings obtained from these questions were;

- Users from all age groups wanted to see more colorful flowers in open spaces. Pink, however, was the least favorite of the colors they wanted to see.
- The users from all age groups generally preferred to see grassy fields and tree cover in equal amounts in open green areas. Users do not want open areas to be totally covered with trees.
- Plants appealed to the users from all age groups with their colors, as compared to their other qualities, such as odor, size, form and texture. For the age groups of 26–34, 61–65 and 65 plus, the texture of the plant was more appealing, and, for the age groups of 61 and above, it was the size of the plant that impressed the users.
- The primary sense organ for enjoying the plants in all age groups was eyesight. Secondary were the senses of smell and touch. The most effective design element to enjoy the plants for all age groups was the color.
- The age groups of 12–18, 19–25, 26–34 and 61–65 years liked both the evergreen and deciduous plants. On the other hand, the age groups of 35–60, 65 years and above liked evergreen plants the most.
- Grass is the most preferred material for park walkways, compared to other materials, such as concrete, wood, brick, soil, asphalt, stone facing, pebbles, etc. The reasons why grass was preferred was because of its being natural (50%), being soft (43%), and being solid and smooth (7%). The least preferred material

[†] Developmental psychology, one of the sub branches of psychology, analyses the relationship between the chronological age of the individual (states) and the type of his/her behavior in a multi-directional way (Cüceloğlu 2003). States do not change, show consecutiveness and are universal in all cultures (Onur 2001).

was brick (1.4%). Most of the users mainly preferred natural materials for walkways (wood, grass, soil, etc.).

- All of the age groups preferred wooden benches, compared to other bench materials in the parks, such as concrete, iron, plastic, etc. The reasons why the users preferred wood was that it was warmer than concrete (48.8 %), is more comfortable (25.6 %) and it's natural (22.0%). By the end of the questionnaire, it can be discerned that the users do not prefer iron benches.
- Having too many stairs in parks affected the 19-25 years old group the least, since they were the strongest age group; however it had a negative effect on the 26 years and above age group who tended to go to parks, and prevents the 61 years and above age group, from going to parks.
- The presence of a pool in the park was not an important factor for any of the age groups in their choice to go or not to go to parks.
- Users of 12–18, 19–25 and 26–34 years of age groups wanted most to see waterfalls in the parks, compared to other water features such as still water, flowing water or fountain pools, etc.; while the 61-65 years of age group did not want to see waterfalls and the 61-65 and 65years and above age groups did not want to see still water. All of the users most preferred active water types, (flowing, fountain pool, waterfall, etc.) because users wanted to become aware of water not only visually, but also by its other qualities of coolness, sound, etc. which address the other sense organs.
- Users' tendencies to go to parks depend upon the seasons: 53.4% of them go to parks in all the seasons, while the 65 years and over age group did not want to go to parks in winter, due to the slippery ground.
- Including lighting forms, such as all dark, all light and dim spaces, or light in some spaces and dim in some spaces, the 12-18 years of age group wanted the parks to be all light, compared to the other age groups. The users of 26 years and over age groups did not want dark spaces. Almost all age groups preferred parks to be light in some spaces and dim in some spaces. The most important factor which affects users' preferences about park lighting is the mood they are in when they go to parks (43.9 %).
- Accessibility to parks mostly affects the 19-25 years of age group. 47.4% of this age group will go to parks which are closer to their homes. For the 61-65 years of age group, proximity of a park to their home is not important for using that park. These users go to the parks they like, since they have plenty of time and private cars, as they are mainly retired.
- Accessibility is considered to be a factor for 19.1%, in walkway material preference. Users prefer nonslip, even, smooth, solid materials which better facilitate accessibility.
- Walking is the most preferred activity for all age groups. Other activities decrease as the users grow older.

4. Conclusion

According to the findings obtained from the questionnaire study, conducted with the users of designed landscapes, it is perceived that likes and preferences related to park areas, show changes depending on the ages of the users. There is a relationship between the age groups of the users;

- Flower color preferences in 20% of the sample.
- Their favorite plant type in 5% of the sample.
- Their preferences in going to parks with highly inclined, multiple-staged stairs in 20% of the sample.
- The tendency in going to parks, depending on the seasons in 20% of the sample. These preferences show differences, depending on the age of the sample groups.

On the other hand, there is a lack of a meaningful relationship between some important factors of landscape design and some preferences of user age groups. These are:

- Open space preferences (having grassy fields and tree cover in equal amounts is a common preference for all age groups),
- Material preferences in park walkways,
- Preference in bench materials (a wooden bench is a common preference for all age groups),
- The influence of the presence of a pool in going to parks,

- Park lighting.

Through this questionnaire study, it is detected that, in landscape design intended for all age groups, a balance of factors should be considered, instead of taking into consideration only one or a few of the age groups;

- The users' tendency to choose flowers in different colors from the parterre and their wish to see grassy fields and tree presence in equal amounts, in terms of texture, show that users psychologically seek for balance in their environment.
- Choosing colorful flowers shows that users want neither active and tiring spaces which they feel psychologically appropriate for warm colors, nor calm and gloomy spaces which they feel psychologically appropriate for cold colors.
- Another indicator related to the users' search for balance, emerges in their choice of grassy fields and tree cover in open spaces. Users want open spaces to not be narrow, constrained and shadowy, or totally bright.
- Users seek for balance in terms of form, as they want to have grassy fields and woodland in equal amounts, and they do not prefer areas which have totally horizontal or totally vertical forms.

Detecting user preferences in landscape design is essential, in terms of extracting important results, to form and direct the design. All of these particularities of open space users should be considered in designs. When the likes, preferences and peculiarities of the users, created under the influence of the users' developmental psychology, are taken into consideration, designed spaces will be enjoyed more often by the most users.

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